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Case No. 10420/15

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Imundo et al.

Serial No.: 09/853,945

Examiner: Jermie E. Cozart

Filed: May 11, 2001

Group Art Unit: 3726

For: Process for Repairing a  
Structure

**REPLY BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is in response to the Examiner's Answer, filed June 6, 2006.

**REPLY TO EXAMINER'S ANSWER**

Appellants have chosen to address selected particular points of the Examiner's Answer, as many of the Examiner's arguments repeat the final rejections and thus are addressed in Appellants' Request for Reinstatement of Appeal And Appeal Brief. Therefore, the lack of a specific response to a point raised in the Examiner's Answer is not a concession of the rejection. Rather, Appellants' position may be found in their Request for Reinstatement of Appeal And Appeal Brief filed on January 27, 2006.

**A. The Examiner has failed to show that there is a motivation to combine Richter and Heier**

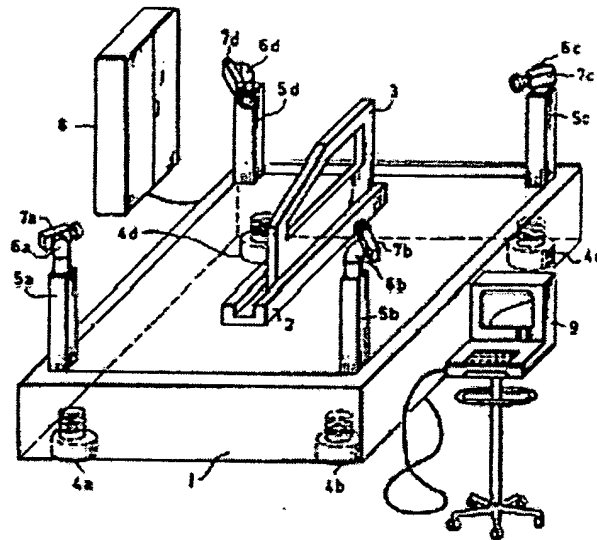
The Examiner has rejected independent claims 1 and 12 under 35 U.S.C. §103(a) in view of Richter and in further view of Heier. The Examiner appears to be finding a sufficient motivation to combine based on each of the references disclosing a digital measuring device, without taking into account that all digital measuring devices are not necessarily the same, and thus do not necessarily operate in the same way and solve the same problems. Conceding that Richter does not disclose a multi-axis measuring device (see Examiner's Answer, p. 4), the Examiner relies upon the coordinate measuring machine (CMM) of Heier so that the combination of Richter and Heier "selectively record[s] horizontal optical intersects of a given work-piece at different heights." Office Action, p. 4, lines 10-17.

The Examiner, however, provides no other justification for combining these references other than that they both are directed to digital measuring devices. In fact, however, a reading of Richter shows that one skilled in the art *would not* be motivated to combine the teachings of Richter with Heier. Specifically, Richter teaches that a digital camera captures an image of a blade at a particular height *h*. Based on this *single* image taken of a blade at a particular height, Richter achieves his repair of a repair part "in the form of a sheet or a plate having a proper thickness *d* so that the total height of the blade after being repaired will correspond" to the desired height. Richter, col. 4, lns. 45-59. Indeed, since Richter can achieve his repair by recording a single image at one particular height, there would be no need to look past Richter in order to record optical intersects at different heights (as disclosed in Heier). Indeed, while the Examiner claims "a more comprehensive image" may be obtained by combining Richter and Heier (Examiner's Answer, p. 8), this is nothing more than impermissible hindsight and conjecture. The Examiner fails to explain

why one skilled in the art would make this combination, when one could use the teachings of Richter, thus requiring the taking of a single image at a single height, to make a complete repair.

**B. The Examiner has failed to show that the improper combination of Richter and Heier discloses all the limitations of claims 1 and 12**

The Examiner wrongfully insists that the CMM device of Heier, which is comprised of four cameras, is the equivalent of the *single* multi-axis digital measuring device as claimed in claims 1 and 12. Not only is this incorrect, but Appellants actually distinguish between a single multi-axis coordinate measuring machine 40, as depicted in Fig. 4, and a CMM. Compare Appellants' Application, p. 5, lns. 10-12 with p. 6, lns. 24-26. Indeed, unlike the device of Heier, the specification of Appellants' application provides ample support that the claimed multi-axis digital measuring device is a single machine. See Appellants' Application, p. 5, lns. 10-12. See *Phillips v. AWH Corp.*, 415 F.3d 1315, 75 U.S.P.Q.2d 1321, 1327 (Fed. Cir. 2005) (the specification is the best guide to interpreting the claims). In contrast, and as shown below, Heier discloses a CMM that is made up of four cameras, or machines, 7a-7d. See e.g., Heier, Fig. 1.



**FIG. 1**

As explained in Appellants' Brief, the CMM of Heier requires four cameras and four articulating heads (one for each camera), each with its own housing, in four widely-spaced locations, with each head having a provision for selective rotation about each of two

orthogonally related axes. Heier, Abstract, Ins. 3-7. Simply put, the device of Heier, a CMM, is not the claimed multi-axis digital measuring device.

Further support that the claimed multi-axis digital measuring device is a single machine can be found in the other claims. *See Jansen v. Rexall Sundown Inc.*, 342 F.3d 1329, 1333, 68 U.S.P.Q.2d 1154, 1158 (Fed. Cir. 2003) (claims can and should be interpreted in view of other claims). As Appellants point out in their opening brief, which the Examiner does not address, claims 5 and 17 refer to “the device,” thus referring to a single device (as opposed to “devices”). Moreover, claims 6 and 17 do not make sense if the recited mounting bracket refers to more than a *single* “multi-axis device.” Thus, there is ample support in the claims that the claimed multi-axis digital measuring device is a single device.

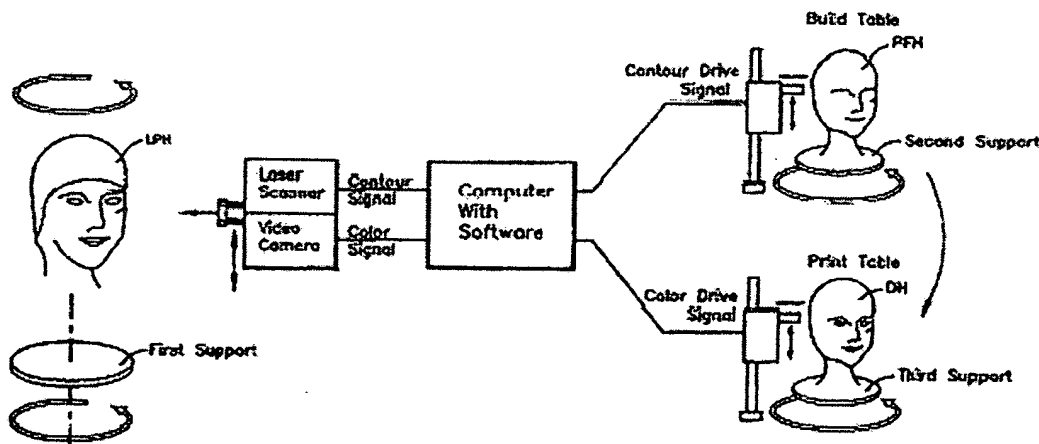
Accordingly, Appellants respectfully submit that independent claims 1 and 12 are distinguishable from Richter and Heier and contain allowable subject matter. Dependent claims 2-11 and 13-22 depend from claims 1 and 12, respectively, and are allowable for this same reason and for the additional reasons provided below and in Appellants’ Request for Reinstatement of Appeal And Appeal Brief.

**C. The Examiner has failed to show that the improper combination of Richter and Heier discloses all the limitations of claims 2 and 13**

The Examiner is incorrect when claiming that the “angular measurement values” disclosed in Heier constitutes the claimed “additional data.” *See Examiner’s Answer*, pp. 8-9. Heier teaches that both positional measurement values and angular-measurement values are stored in the computer 10 of the CMM. Heier, col. 5, Ins. 49-63. With respect to the angular-measurement values, Heier discloses that at the same time as the positional measurement values are being stored, the images that correspond to the different angular positions of the camera (i.e., the angular-measurement values) are also being transmitted to the computer of the CMM. Heier, col. 5, Ins. 56-63. Thus, the Examiner is wrong in claiming that the angular-measurement values constitute “additional data” because they are not necessarily saved. *See Examiner’s Answer*, p. 8. As such, Heier fails to disclose the claimed “additional data” and thus the combination of Richter and Heier fail to disclose all the limitations of claims 2 and 13. Accordingly, Appellants respectfully submit that for this additional reason claims 2 and 13 are distinguishable from Richter and Heier and contain allowable subject matter.

**D. The Examiner has failed to show that the improper combination of Richter and Heier discloses all the limitations of claims 8, 11, 19 and 22**

The Examiner is incorrect in stating that one of ordinary skill in the art would look to substitute the CMM device of Heier with the laser scanner of Flint. First, as the Appellants state in their brief, Richter and Heier, via digital cameras, already produce digitized signals, and thus one of ordinary skill would not be motivated to look to lasers to achieve a digitized signal (Appellants' Brief, p. 14).<sup>1</sup> Next, Richter and Heier are specifically directed to digital cameras, and the Examiner never explains why one of ordinary skill would look to the laser arts to combine lasers with the disclosures of Richter/Heier. Furthermore, the CMM device of Heier, as described above, requires 4 cameras, with 4 separate articulating heads and housings, as well as specific software. Flint, on the other hand and shown in Figure 1 below, is directed to a single scanner that requires custom software. Compare Flint, Fig. 1 (reproduced below) with Heier, Fig. 1 (reproduced above); see Flint, Abstract.



**FIG. 1**

Thus, there is no combination to combine Flint with Richter/Heier. Accordingly, Appellants request the Board to reverse the rejection under 35 U.S.C. § 103(a) of claims 8, 11, 19 and 22 over Richter in view of Heier and in further view of Flint.

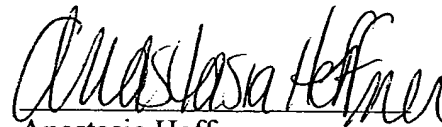
<sup>1</sup> Moreover, as Appellants explain above, one skilled in the art would not look to combine the digital measuring machine of Richter with the CMM device of Heier.

**CONCLUSION**

Contrary to the Examiner's arguments set forth in the Examiner's Answer, it is respectfully submitted that the cited references do not teach the structure that is present in Appellants' claims, thus failing to teach each and every element of those claims. Appellants further submit that the present invention is fully patentable over the cited reference and thus, the Examiner's rejection should be REVERSED.

Respectfully submitted,

Dated: August 4, 2006

  
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